Human/Mouse Sonic Hedgehog/Shh Alexa Fluor® 532-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF464X
100 µg

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Sonic Hedgehog/Shh N-Terminus in direct ELISAs and Western blots. In direct ELISAs, less than 15% cross-reactivity with recombinant mouse (rm) Dhh N-Terminus and rmIhh N-Terminus is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse Sonic Hedgehog/Shh N-Terminus Cys25-Gly198 (Lys122Arg) Accession # Q62226
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

The *hedgehog* (*hh*) gene encoding a secreted protein was originally identified in *Drosophila* as a segment polarity gene. The vertebrate homologues of Hh comprise several proteins including sonic hedgehog (Shh), Indian hedgehog (Ihh), and Desert hedgehog (Dhh). Hedgehog proteins are important signaling molecules during embryonic development. Shh genes are highly conserved and have been identified in a variety of species including human, mouse, frog, fish, and chicken. Mouse and human Shh are 92% identical at the amino acid sequence level. Shh is expressed in key embryonic tissues such as the Hensen's node, the zone of polarizing activity in the posterior limb bud, the notochord, and the floor plate of the neural tube. Shh is involved in regulating the patterning of the developing central nervous system, somite, and limb. Shh plays an important role in the development of particular tissues such as whisker, hair, foregut, tooth and bone. Evidence also suggests that Shh is involved in regulating stem cell fates of neural and hematopoeitic lineages, and that aberrant Shh signaling is implicated in basal cell carcinomas and other diseases.

Mouse Shh cDNA encodes a 437 amino acid residue with a predicted 24 aa residue signal peptide that is cleaved to generate a 413 aa residue precursor protein. An autocatalytic reaction yields a 19 kDa amino-terminal domain Shh-N protein containing cholesterol and palmitate, and a 27 kDa carboxy-terminal domain Shh-C protein. The N-terminal domain retains all known signaling capabilities, while the C-terminal domain is responsible for the intramolecular processing, acting as a cholesterol transferase. Shh can act as both a short-range contact dependent factor and as a long-range, diffusible morphogen. At the cell surface, Shh activity is mediated by a multicomponent receptor complex involving the 12-pass transmembrane protein Patched (Ptc) which binds Shh with high affinity and Smoothened (Smo), a signaling seven transmembrane G-protein coupled receptor. In the absence of Shh, Ptc represses Smo activity. The binding of Shh to Ptc, releases the basal repression of Smo by Ptc (1-5).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.

Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475